日本古生物学會
報告・紀事

Transactions and Proceedings
# of the
Palaeontological Society of Japan

昭和 12 年　　第 8 號
1937　　No. 8

〔地質學雜誌　第 44 卷　第 526-528 號　拔刷〕
[Reprinted from Jour. Geol. Soc. Japan, Vol. 44, No. 526-528.]

日本古生物學會
Palaeontological Society of Japan

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日本古生物學會報告
(Transactions of the Palaeontological Society of Japan)

40. *A Petrified Wood dredged from the Bottom off the Coast of Tobisima, Yamagata-ken.*

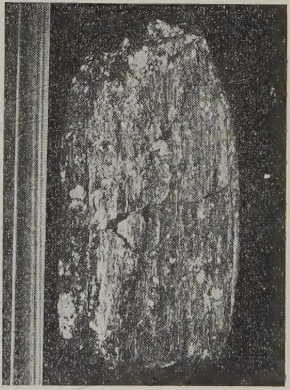
By

Misaburô SHIMAKURA

(Contribution from the Institute of Geology and Palaeontology, Tôhoku Imperial University, Sendai, Japan; read Feb. 29 th., 1936; received April 28 th., 1937)

Early in 1935, Professor H. NIINO of the Imperial Fisheries Institute, Tôkyô, sent to the writer a fossil wood dredged from sea-bottom off the coast of Tobishima, Yamagata-ken, at a depth of 10 meters. The specimen is a fragment of black petrified wood, 12 cm. long and 6.5 × 3.5 cm. broad; being very well preserved, it is worth describing (Text-fig. 1).

Text-fig. 1.



Structure

Transverse section:—Growth rings relatively wide, boundaries indistinct, transition from early to late wood very gradual. Vessels evenly distributed, 2–5 per square mm., gradually diminish in size toward late wood, arranged singly or in groups; single pores circular, oval, or elliptical in outline, $120\text{–}260\mu \times 110\text{–}220\mu$ in diameters, common cell-walls $3\text{–}5\mu$ thick; grouped pores 2–3, rarely 4, connected radially in direction. Tracheids not clear. Wood fibres abundant, thick-walled, although secondary layer of most fibres disappeared. Wood parenchyma metatracheal, 2–3 cells wide, rarely paratracheal or terminal, crystal-bearing idioblasts occur in metatracheal parenchyma bands.

Rays uniseriate and polyseriate; horizontal walls pitted; lateral walls irregularly thickened. (Pl. 21 (9), figs. 1–2).

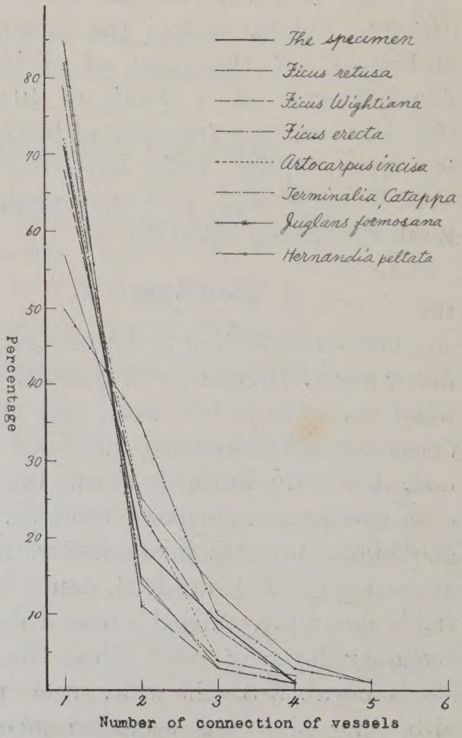
Radial section:—Perforation of vessels simple, end walls horizontal or slightly slanting, lateral walls covered with bordered pits where two vessels are in contact; pits circular or oval, alternate, sometimes partly opposite, with small, oval or oblong apertures. Tyloses occasionally present in early wood vessels. Wood fibres libriform, lateral walls apparently smooth, with small, circular pits, often separated. Wood parenchyma short, horizontal walls smooth and thin, sometimes slightly thickened, idioblastic large cells contain rhomboidal crystals. Rays heterogenous: marginal cells upright, one or more rows, sometimes transformed into large crystal-bearing cells and connected with wood parenchyma in vertical rows; becumbent cells medial, abundant; horizontal and tangential walls of ray cells much thickened, lateral walls with many small, circular, half-bordered pit-pairs in fields crossing vessels (Pl. 21 (9), fig. 3).

Tangential section:—Bordered pits on lateral walls of vessels small, circular, and alternate. Wood fibres abundant. Rays heterogenous, 1–6, mostly 2–5, cells wide, 2–50 cells high, 17–24 per square mm.; marginal upright cells oval or somewhat irregular in outline, rarely containing crystals; becumbent cells small, circular in outline, all tangential walls of ray cells pitted (Pl. 21 (9), fig. 4).

Affinity

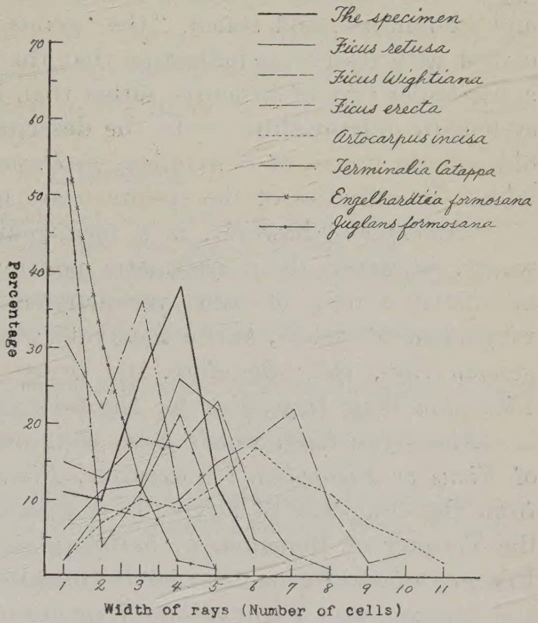
It is clear that this is a dicotyledonous wood. The arrangement of vessels in

Text-fig. 2.



this wood is generally diffuse, but sometimes tends to be radial. Useful criterion for identification of diffuse porous woods is the number of vessels per square mm., although it varies with age, with position in tree, and also in the correlation with varying external conditions; small number of vessels, as 2–5 on an average, is found in the woods of *Juglans, Ficus, Artocarpus, Myristica, Hernandia,* and *Diospiros,* for example. The arrangement of wood parenchyma is also an important character; the alternation of metatracheal bands more than 2 cells wide is common in the woods of *Ficus, Cretaerisperum,* and *Symphonis,* etc. Tyloses are present in the woods of Moraceae, Fagaceae, Leguminosae, and some others.

Text-fig. 3.



In the proportion of grouped vessels to single ones, and in the mode of connection of vessels, the present specimen is more similar to *Ficus* than to any other genera (Text-fig. 2). Furthermore, heterogenous rays of 1–6 cells wide distinguishes the present wood from those of *Juglans, Myristica, Hernandia* and *Diospiros* (Text-fig. 3). According to Jones, *Ficus*-type of timber is characterized by numerous crystals in vertical parenchyma and ray cells and pronounced swelling of rays in parenchymatous zones, and differs from *Stereosperum* with little or no swelling of rays on entering the parenchymatous zones. By these characteristics, the present specimen is regarded as belonging to the so-called "*Ficus*-type" wood.

Various fossil woods showing the *Ficus*-type of structure have been referred to *Ficoxylon.* Bancroft pointed out that the *Ficus*-

type of structure occurs in the woods of 1425 species in 18 genera and 12 families, and stated, "the 'genus' *Ficoxylon* must be accepted with reserve as indicating that the fossils bearing it possess a particular type of structure rather than that they have a definite systematic relationship.——In the description of fossil woods, the old generic names of SCHLEIDEN——*Dryoxylon*——should be used where the affinities of the specimen are uncertain——"

'*Ficoxylon*' however, is a form-genus for fossil *Ficus*-type woods, whatever their systematic position may be, showing the alternative zoning of wood parenchyma and fibres, a special arrangement of vessels, and a moderate width and height of heterogenous rays, etc.; therefore, the writer rather prefers to apply *Ficoxylon* than *Dryoxylon* for the present wood.

Ficus-type fossil woods have been described under the name of *Ficus* or *Ficoxylon*, for example, *Ficoxylon cretaceum* SCHENK from the Oligocene of Egypt, *F. tropicum* (SCHLEIDEN)FELIX from the Tertiary of Bohemia, *F. helictoxyloides* PLATEN from the Mio-Pliocene of California, *F. zirkeli* HOFMANN from unknown locality and horizon, and *Ficus callosa* WILLYDENOWY from the Pleistocene of Java. They are all compared with living species of *Ficus*. The present specimen differing from these *Ficus*-type woods in the width of wood parenchyma, is regarded better to be described under a new name: the diagnosis follows.

Ficoxylon KAISER 1880

Ficoxylon angustiparenchymatosum SHIMAKURA, n. sp.

Diagnosis:—Dicotyledonous wood of *Ficus*-type. Growth rings present, usually indistinct. Vessels diffuse, single or in groups of 2–4 pores, radial in direction, 2–5 per square mm.; single pores 120–260 μ × 110–220 μ broad, circular or oval; grouped pores in close contact; perforation simple, lateral walls when in contact, covered with small, closely arranged bordered pits. Fibres constitute fundamental parts of wood, libriform, often septated, lateral walls with small pits. Wood parenchyma metatracheal, 2–3 cells wide, lateral and horizontal walls irregularly thickened, often large idioblastic cells containing rhomboidal crystals. Rays heterogenous, 1–6 cells wide, 1–50 cells high; upright cells marginal, becumbent cells medial, horizontal walls thin, lateral walls with small pits in fields crossing vessels.

Occurrence:—The sea bottom off the coast of Tobisima, Yamagata-ken. (Reg. No. 57693). Probably Tertiary in age.

In conclusion, the writer wishes to express very grateful thanks to Prof. H. Yabe for his kind guidance ; to Mr. K. Hatai for correcting the present paper before publication ; to Prof. H. Niino for submitting the material to his study.

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Explanation of Plate 21 (9).

Ficoxylon angustiparenchymatosum Shimakura, n. sp.

Fig. 1. Transverse section of the wood. × 15.
Fig. 2. The same section of a part of the wood. × 40.
Fig. 3. Radial longitudinal section of the wood. × 40.
Fig. 4. Tangential longitudinal section of the wood. × 40.

山形縣飛島沖の海底から出た材化石（摘要）

島倉巳三郎

1935年の初め，山形縣飛島沖10 mの海底からドレッヂされた木幹化石を，東京水產講習所の新野助教授から送付せられたが，調查の結果 *Ficoxylon* に屬する新種であるから茲にその記載を試みた。

該標本は散孔材で，導管は大きく單獨又は數個結合し，穿孔は單一，單位面積（$1\,\mathrm{mm}^2$.）中に2〜5個分布する。切線狀柔組織よく發達し，1〜6細胞幅の異性射出線を有し，その緣邊細胞及び垂直柔細胞中には結晶を含むイデオブラストがあり，所謂“*Ficus*-type”の材である。既知 *Ficoxylon*（及び *Ficus*）5種及び現生 *Ficus* 屬數種（調查し得た材5種，其他は文獻による）と比較するに柔組織の幅及び性質に於て可なりの相違があるので新種と認め *Ficoxylon angustiparenchymatosum* なる名を與へた。

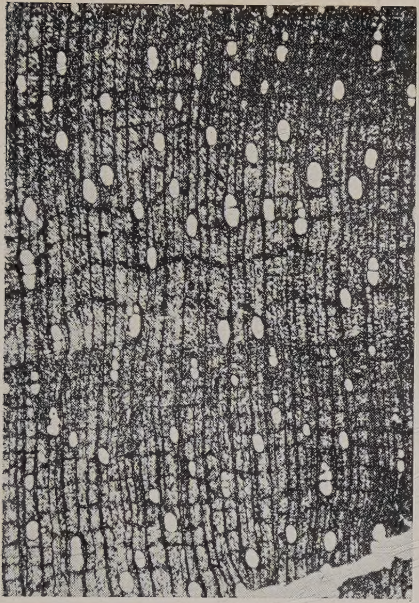

Fig. 1.

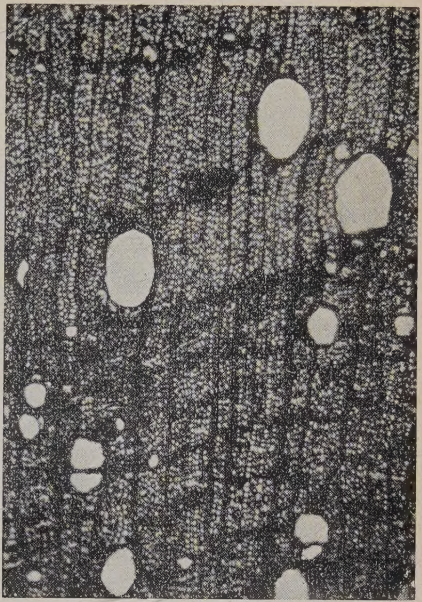

Fig. 2.

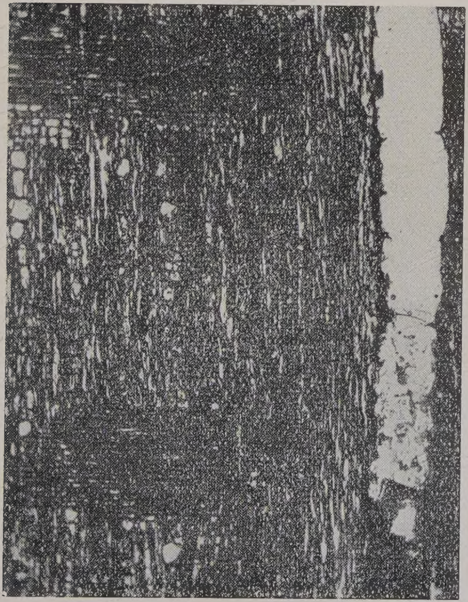

Fig. 3.

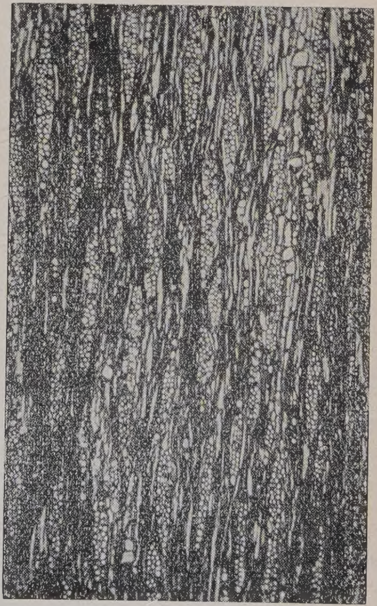

Fig. 4.

41. *Pliocene Shells from the Teshio Oil Field, Hokkaidō**

By

Kinji KANEHARA

(The Imperial Geological Survey of Japan; received
May 1st.; read June 19th., 1937.)

General remarks

The rocks developed in the Teshio Oil Field of Hokkaidō are, in the main, the so-called "Upper" and "Uppermost" Tertiary Series. According to K. WATANABE[1] of our Survey, the "Upper Series" is divided into three beds, namely, enumerated from the lower, Wakkanai Hard Shale, Koitoiye Sandstone, and Yūchi Sandstone. They yield molluscan fossils, those collected by him being preserved in our Survey, and which the writer describes in this paper.

The determined species are as follows:

	Wakkanai	Koitoiye	Yūchi
Solemya (Acharax) tokunagai YOKOYAMA	r		
Acila (Truncacila) kurodai KANEHARA, n. sp.			a
Yoldia cfr. *lischkei* SMITH			r
Yoldia thraciaeformis scapha YOKOYAMA	f		
Navicula sp.			r
Pecten (Patinopecten) yessoensis JAY			r
Pecten (Patinopecten) poculum YOKOYAMA			r
Venericardia tokunagai YOKAYAMA ?			r
Thyasira nipponica YABE et NOMURA	f	f	
Cardium (Cerastoderma) sp.	r		
Serripes notabilis (SOWERBY)	r		
Chione astartoides (BECK)			r
Macoma calcarea GMELIN			a
Macoma nasuta CONRAD	r		
Spisula polynyma alaskana DALL			r

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* By the permission of Dr. S. YAMANE, Director of the Imperial Geological Survey of Japan.

(1) K. WATANABE: Expl. Text. Oil-Fields. Japan. Empire, Sec. XXXI, (Imp. Geol. Surv. Japan.) 1936.

Panomya arctica Lamarck ?		
Mya cuneiformis (Böhm)		f
Periploma yokoyamai Makiyama		r
Turritella (Haustator) saishuensis Yokoyama		f
Turritella (Haustator) nipponica Yokoyama	f	r
Natica (Tectonatica) janthostoma Deshayes		f
Ranella (Priene) oregonensis (Redfield)		r
Neptunea vinosa (Dall)		r
Plicifusus yanamii (Yokoyama)		r
Trophon (Boreotrophon) beringi (Dall)		r
Ancistrolepis peulepis Kanehara, n. sp.		r

(r—rare, f—frequent, a—abundant.)

This fossil fauna, although quite small in number, seems to be a typical boreal one. Deducting four which have not been acurately determined, of the twentysix species above enumerated, there remain twentytwo of which eleven are still living and the remaining eleven not yet known as living. The "Upper Series" is underlain by the "Middle Series" of Miocene age. From these considerations and from the stratigraphical standpoint, we may say that the age of the beds containing these fossils is Pliocene.

Description of the Species

Genus *Solemya* Lamarck, 1818.

Subgenus *Acharax* Dall, 1908.

Solemya tokunagai Yokoyama

Solemya tokunagai Yokoyama: Jour. Coll. Sci. Imp. Univ. Tokyo., Vol. XLV, Art. 5, p. 31, Pl. VI, figs. 1, 2, 3.

Remarks:—A large specimen was obtained, which is measured over 100 mm. long and 40 mm. high.

Locality:—Southern tributary of Tokotnai (Mibu-no-Minamizawa) Chūwō-Sarakishi.

Geological horizon:—Wakkanai Hard Shale.

Occurrence:—rare.

Genus *Acila* H. and A. Adams, 1858.

Subgenus *Truncacila* Schenck, 1931.

Acila kurodai Kanehara, n. sp.

Pl. 22 (10), figs. 4–10.

Nucula cobboldiae Sowerby, Yokoyama: Jour. Fac. Sci. Imp. Univ. Tokyo, Sec. II, Vol. 1, Pt. 7, p. 246, Pl. XXXI, figs. 3, 4.

Acila "*cobboldiae* (Yokoyama)", Kuroda: Venus Vol. I, No. 3, Appendix p. 8.

Acila insignis (Gould), Schenck (partim.): Geol. Soc. America Spec. Papers No. 4. p. 99.

Holotype:—A left valve from the Yuichi Sandstone; preserved in the Imperial Geological Survey of Japan.

Remarks:—This species was once examined by T. Kuroda, according to whom it has erroneously identified as *Nucula cobboldiae* Sowerby by Dr. M. Yokoyama, with which, however, it resembles neither in outline nor in sculpture. Dr. H. G. Schenck has united this species to *Acila insignis* (Gould). But *Acila insignis* (Gould) is much thicker and of less height with finer sculpture than the present species. Further, the former has no area of obsolete radial ribbing, which is very distinctly developed on the latter. The line of primary bifurcation of *Acila insignis* (Gould) is situated much farther behind than that of the present species. The cordate escutcheonal view of the latter is a remarkable contrast to the almost rounded view of *A. insignis* (Gould). The writer proposes the name *Acila kurodai* for Yokoyama's "*Nucula cobboldiae* Sowerby", reported from Embets and Teshio of Hokkaidō and Kurosawa, Akita-Pref.

A description of *Acila* (*Truncacila*) *kurodai*, n. sp. follows:

Shell thick, longer than high, moderately inflated, ovate-rounded in outline. Antero-dorsal margin gently convex. Anterior end more acutely rounded than posterior. Ventral margin broadly convex. Posterior margin convex because of pouting in escutcheonal area. Beaks appressed and opisthogyrate. Escutcheonal area ill-defined by blunt ridge running posteriorly. Lunule narrow, more or less distinct. Rostral sinus almost indistinct. Shell smooth until it reaches height of 1.5 mm., then bifurcating radial ribs appear, separated by narrower interspaces. Ribs rough and gradually widen. Secondary bifurcation developed, although rarely, on the antero-dorsal area, especially on full grown specimens. Inner margin crenate on younger shells and not on adult ones, on which is developed distinctly the area of obsolete radial ribbing. Interior nacreous, smooth and shining. Hinge with narrow triangular chondrophore directed forward. The anterior line of teeth long, started from the beak, slightly arched, increasing in height distally, about two-thirds the length of dorsal margin, with about 22 teeth; the posterior one meeting the anerior at nearly 100 deg., short and straight, with about 12 teeth; the first teeth is parrallel to the lower edge of the chondrophore.

Dimentions:—	Length	Height	Thickness	Semi-thickness
Holotype	32.0 mm.	26.4 mm.		8.5 mm.
Paratype No. 1.	30.5	25.0	16.8	
No. 2.	23.8	18.2	11.0	
No. 3.	22.0	18.0	10.8	
No. 4.	25.0	25.8		5.3
No. 5.	34.0	29.0		10.5

Locality:—Ainu-zawa Yoshida-zawa, both tributary to Paromautnai; Higashi Hassen-no-sawa, Nishi-Onupnai, Onupnai.
Geological horizon:—Yūchi Sandstone.
Occurrence:—rare.

Genus *Mya* LINNAEUS, 1758.
Subgenus *Mya* s. s.
Mya cuneiformis (BÖHM)

Pleuromya cuneiformis BÖHM: Jahrb. Preuss. Geol. Land., p. 557, Pl. 29, figs. 1, 2.
Mya donaciformis KURODA: HOMMA's Geol. Central Shinano, p. 63, Textfig. 7.

Remarks:—The largest specimen is measured 120 mm. long, 87 mm. high and 55 mm. thick.
Locality:—Yoshida-zawa, a tributary of Paromautnai, Onupnai.
Geological horizon:—Yūchi Sandstone.
Occurrence:—abundant.

Genus *Neptunea* BOLTEN, 1798.
Neptunea vinosa (DALL)
Pl. 22 (10), fig. 1

Chrysodomus vinosus DALL: Proc. U. S. Nat. Mus., Vol. 56, p. 323., Vol. 66, Art. 17, p. 10, Pl. 6, fig. 3.

Remarks:—The morphological variations of shell characters are frequently observed especially on the shells of the northern sea. The specimens now under consideration seems slightly more slender compared to the illustrated figure given by DALL.
Locality:—Ainu-zawa, a tributary of Paromautnai.
Geological horizon:—Yūchi Sandstone.
Occurrence:—rare.

Genus *Plicifusus* Dall, 1902.

Plicifusus yanamii Yokoyama

Bela yanamii Yokoyama: Jour. Coll. Sci. Imp. Univ Tokyo, Sec. II, Vol. 1, Pt. 8, p. 261, Pl. XXXII, fig. 11.

Locality:—Yoshida-zawa, a tributary of Paromautnai.
Geological horizon:—Yūchi Sandstone.
Occurrence:—rare.

Genus *Trophon* Montfort, 1810.

Subgenus *Boreotrophon* Fischer, 1884.

Trophon beringi Dall

Pl. 22 (10), fig. 3

Trophon (*Neptunea*) *beringi* Dall: Proc. U. S. Nat. Mus., Vol. 24, p. 544, Smiths. Inst. U. S. Nat. Mus. Bull., 112, p. 109, Pl. 10, fig. 6.

Locality:—Northwest of Onupnai-Pass, Onupnai.
Geological horizon:—Yūchi Sandstone.
Occurrence:—rare.

Genus *Ancistrolepis* Dall, 1894.

Ancistrolepis peulepis Kanehara, n. sp.

Pl. 22 (10), fig. 2

Holotype:—An example from the Yūchi Sandstone; preserved in the Imperial Geological Survey of Japan.

Description:—Shell conic, rather thick, with about seven turreted whorls. Nucleus smooth, of one whorl. Suture distinct and linear, with wide channel in front owing to first spiral rib. Axial sculpture of faint lines of growth. Spiral sculpture between the sutures of four strong, squarish, prominent ribs, with slightly narrow channeled interspaces, of which there are about seven on last whorl. Aperture ovate. Outer lip not thickened, undulated by ends of ribs. Thin callus on inner lip. Columella short and reflected. Canal twisted, rather narrow, deeply recurved, forming strong fasciole.

Occurrence and comparison:—Only one well preserved specimen was obtained by Watanabe. An allied species is *Buccinum eugrammatum* Dall⁽¹⁾, which was reported from the Petrol Bank of Bering Sea. The present species is distinguished from *B.*

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(1) W. H. Dall: Smiths. Miscel. Coll., Vol. L., Publ. No. 1725, p. 153, (1907). Smiths. Inst. U. S. Nat. Mus. Bull. 112, p. 98, Pl. 12, fig. 2.

eugrammatum by its lower spires, nonbeaded posterior spiral rib and shorter columella. Apparently the latter has a thinner shell.
Dimensions:—30 mm. high and 19 mm. in maximum diameter.
Locality:—Yoshida-zawa, a tributary of Paromautnai.
Geological horizon:—Yūchi Sandstone.

Explanation of Plate 22 (10)

(All figures are in natural size)

1a and 1b.	*Neptunea vinosa* (DALL)
2a and 2b.	*Ancistrolepis peulepis* KANEHARA, n. sp.
3a and 3b.	*Trophon* (*Boreotrophon*) *beringi* DALL.
4, 5a, 5b, 5c, 6a, 6b, 7, 8, 9a, 9b 9c.	*Acila* (*Truncacila*) *kurodai* KANEHARA, n. sp. (Paratypes)
10.	*Acila kurodai* KANEHARA, n. sp.(Holotype).

天鹽油田產鮮新期貝化石 （摘要）

金原均二

玆に記載したのは渡邊技師によつて天鹽油田から採集せられた資料に就いてである。この化石の一部は既に渡邊技師の報文中に發表せられ，且野村，大塚，畑井の諸學士によつて檢せられたものであるが，特に上記の諸氏の許可を得て敢て記載を試みたのは，僅か乍ら新種を含み，又化石としてその產出を未だ知られぬ種もあるばかりでなく，化石による地層對比の基になる一つのデータたり得ると信ずるからである。

總數僅かに 26，中種名を決定し得たものは 22 種，甚だ貧弱な動物群だが，所謂北海道の上部第三紀層が從來考へられて居た様に鮮新統であるといふ考へと矛盾しない性質を有する。

終にのぞみ發表を許可せられた山根所長，色々御指導をいただいた渡邊技師，野村，大塚畑井諸學士に厚く感謝の意を表する。

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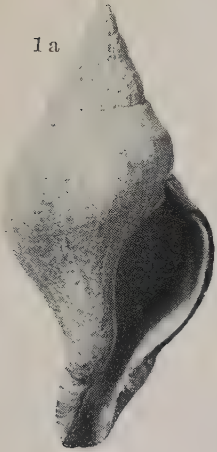

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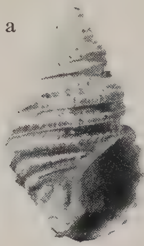

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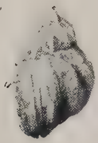

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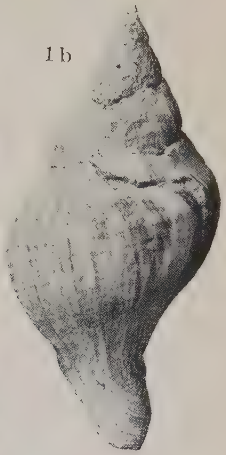

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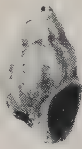

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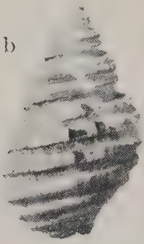

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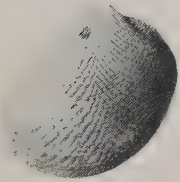

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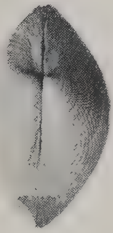

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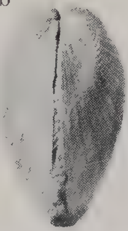

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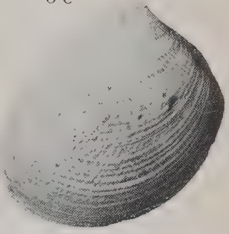

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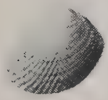

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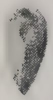

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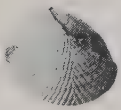

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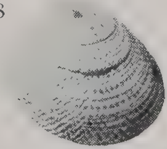

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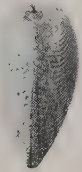

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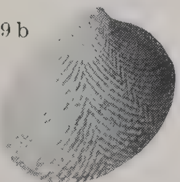

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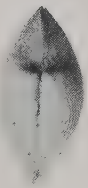

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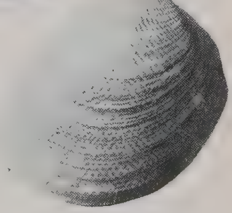

42. *Polydesmia canaliculata* Lorenz, an Ordovician Actinoceroid Cephalopod.

By

Curt TEICHERT, Copenhagen.

(Recieved May 13th, read June 19th, 1937)

Some time ago Dr. T. KOBAYASHI directed my attention to the possibility that the genus *Maruyamaceras*, established by him in 1931, was identical with the genus *Polydesmia*, described by LORENZ in 1906. Professor W. SOERGEL kindly placed the holotype and only specimen of *Polydesmia canaliculata* LORENZ at my disposal. This specimen is kept in the collection of the Geological Institute of the University of Freiburg, Germany. The study of this specimen made it clear at once that Dr. KOBAYASHI's assumption about the relation between *Maruyamaceras* and *Polydesmia* was correct.

The genus *Polydesmia* was established by LORENZ for the single species *Polydesmia canaliculata*. The fossil was regarded as a gastropod remain (LORENZ 1906, p. 89). According to LORENZ, the specimen is derived from the lowermost Ordovician ("unterstes Silur") south of Laiwu in Shantung. Nothing is known about the exact horizon or the accompanying fauna. A study of the specimen shows that it is a part of the siphuncle of an actinoceroid cephalopod.

The specimen is 45 mm. long and consists of eleven siphuncular segments. The phragmocone has been destroyed, except for traces of some of the septa which are visible in the vicinity of the siphuncle. The lowest segment preserved is about 14 mm. wide. The width of the segments increases adorally to 17 mm. in the fifth segment. The average height of the segments is about 4.5 mm., except for the two lowest segments which are only 3.5 mm. high. The septal necks are 1.5 mm. to 2.0 mm. long; the segments are broadly nummuloidal and the area of contact between the adapical side of the connecting rings and the adoral

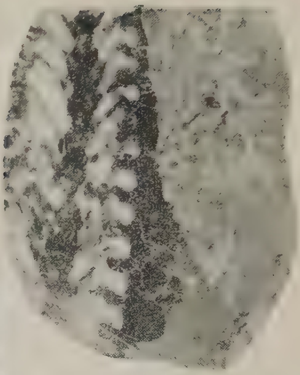

Fig. 1

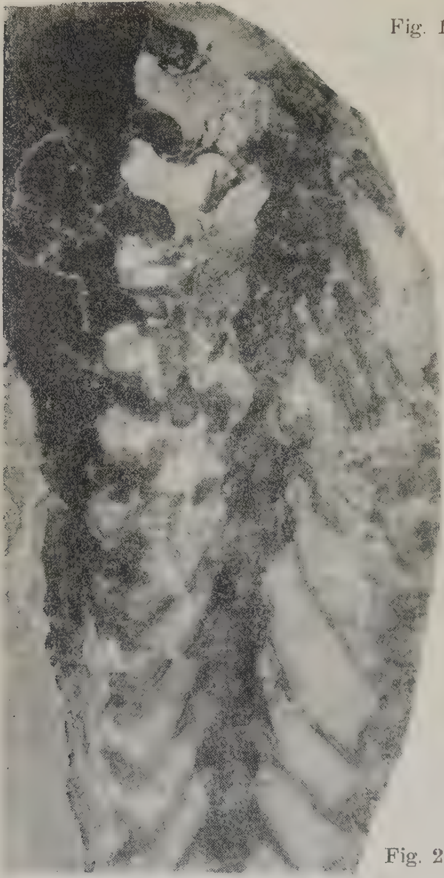

Fig. 2

Fig. 1

Polydesmia canaliculata Lorenz. Holotype. Lower Ordovician, south of Laiwu, Shantung. Nat. size. Geological Institute of the University of Freiburg i. Br., Germany.

Fig. 2.

The same specimen, magnified 2.5 diameters.

surface of the septa is about 2.5 mm. wide. The endosiphuncular canal is broad, its location is apparently not very eccentric. The radial canals are long and steep. They pass obliquely downward through at least two segments, until they open into the perispatium immediately below the septal neck.

The genotype of *Maruyamaceras*, *M. shimamurai* Kobayashi, is evidently congeneric with *Polydesmia canaliculata* Lorenz, and Kobayashi's definition of *Maruyamaceras* can be applied in its essentials to *Polydesmia*, although I would not regard the presence of the vertical lamellae within the siphuncle as a diagnostic feature. I have shown previously (Teichert, 1933, p. 143) that the vertical radiating lamellae within certain actinoceroid siphuncles are probably due to secondary processes of recrystalization of the stereoplasmatic matter. The genus *Polydesmia* may then be defined as follows:

Actinoceroids with very broad siphuncles, the siphuncular segments being very wide and comparatively low; the septal necks long, evenly curved, semi-circular in cross-section. The connecting rings are in broad contact with the adoral surface of the septa.

Genotype: *Polydesmia canaliculata* LORENZ.

In 1931 (p. 54–55), KOBAYASHI described three species of *Maruyamaceras* which now must be placed in *Polydesmia*, viz. *M. shimamurai, M. watanabei*, and *M. peshanensis*. The latter species comes from the *Maruyamaceras* limestone of Shäntung.

As has been pointed out by the present writer in 1933 (p. 221) and by KOBAYASHI in 1934 (p. 457), *Armenoceras elegans* ENDO from the Ssuyen formation of Manchuria (ENDO, 1932, p. 84) belongs to the same genus. The holotype of this species is the most complete representative of *Polydesmia* known hitherto.

None of these four species of *Polydesmia* seem to be conspecific with the genotype. The greatest similarity exists between the genotype and *Polydesmia peshanensis* (KOBAYASHI)—both species come from the Ordovician of Shantung. The height of the camerae is approximately the same in both species. However, as far as can be seen from the picture of *P. peshanensis* reproduced by KOBAYASHI (1931, plate 4 fig. 2b), the septal necks of this species are considerably shorter than those of *P. canaliculata*.

In 1935 (p. 19) I have pointed out that *Maruyamaceras* (now *Polydesmia*) is among the early types of actinoceroid cephalopods. I maintained that the actinoceroids were possibly derived from another, earlier, eurysiphonate stock, viz. the Endoceroidea, and L. F. SPATH has recently expressed similar opinions (1936, p. 165). KOBAYASHI (1934, p. 432) has taken the more conservative standpoint; he indicates that the Actinoceroids are linked with stenosiphonate ancestors by such intermediate forms as *Sactorthoceras*. Unfortunately, the specimen of *Polydesmia* described above does not contribute anything of importance for a renewed discussion of this problem.

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L. F. SPATH: The Phylogeny of the Cephalopoda. Palaeont. Zeitschr., Bd. 18. Berlin. 1936.

C. TEICHERT: Der Bau der actinoceroiden Cephalopoden.—Palaeontographica Bd. 78. Abt. A. Stuttgart 1933.

———: Structures and Phylogeny of Actinoceroid Cephalopods.—Amer. Journ. Sci. 29. 1935.

奥陶紀アクチノセロイド頭足類の一種 *Polydesmia canaliculata* LORENZ（摘要）

Curt TEICHERT

ロレンツ氏の原品を再研究の結果同氏の巻貝と考へたる山東產の本種は *Maruyamaceras* 諸種と同屬にして，從つて *Maruyamaceras* KOBAYASHI, 1931 は *Polydesmia* LORENZ, 1906 の synonym となり，且つ *Polydesmia* は巻貝に非ずして，頭足類に屬する。*Polydesmia* LORENZ, *Polydesmia canaliculata* LORENZ の屬的，種的性質を記し，本種と *P. peshanensis* (KOBAYASHI) との相異を記す（摘要小林）。

43. *On Some Neogene Shells From Japan** (*Part I.*)

By

Kinji Kanehara

(The Imperial Geological Survey of Japan. Received
May 13th; read June 19th, 1937)

In this paper, the writer describes some interesting fossil shells found in the Neogene beds of several localities, now preserved in the Imperial Geological Survey of Japan.

Genus *Melongena* Schumacher 1817.(1)

Melongena sazanami nov. spec.

Pl. 23 (11), figs. 10, 11, 12, 13.

Holotype:—An example from the Uyetsuki Series; preserved in the Imp. Geol. Surv. Japan.

Description:—Shell of medium size, biconical in outline, somewhat elongated, spired with apical angle of about 70 degrees and more. Spire conic, four preserved, strongly shouldered and flat-sided, separated by undulated and feebly depressed suture. Judging from the body whorl, periphery may be ovate and not so large. Outer lip not thickened. Inner lip covered with thin and narrow callus. Anterior canal partly broken, but seems narrow, elongated, and slightly geniculated. Sculpture entirely spiral. Two rows of tuberculum, anterior and posterior, developed, of which the upper forms a keel-like shoulder. Tuberculum, nine on ultimate whorl, eight on penultimate. Numerous rather uniform threads of regular magnitude developed on entire surface.

Dimensions:—72mm. in height, 52mm. in maximum diameter.

Comparison and remarks:—*Melongena brevispira* K. Mar-

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* By the permission of Dr. S. Yamane, Director of the Imp. Geol. Surv. Japan.

(1) Subgenus *Galeodes* s. s. and *Melongena* Schumacher are synonymous, according to J. Thiele.

TIN(1), an Upper Eocene fossil of Java, seems closely allied to the present new species, although the former is provided with more rounded and elongated bodywhorl. *Melongena bucephala* LAM.(2) and *M. ickei* K. MARTIN(3) are provided with far lower spires.

Locality:—Yoshikawa-mura, Maniwa-gun, Okayama-Pref.

Geological horizon:—Uyetsuki Series.

Collector:—M. SATO, Geologist of our Survey.

Occurrence:—rare.

Genus *Turritella* LAMARCK 1799.

Subgenus *Haustator* MONTFORT 1810.

Turritella sakakurai nov. spec.

Pl. 23 (11), figs. 1, 2.

Holotype:—An example from the Haechorei Hard Shale; preserved in the Imp. Geol. Surv. Japan.

Description:—Shell high, turreted with apical angle of 10 degrees, seventeen whorls preserved, all flat and spirally sculptured. Suture distinct but not deep. Wide spiral ribbon, situated close to upper suture, with faint spiral cord superposed on it, and seven cords developed, the lowest of which is subsutural. Of these seven cords, fifth from top rather stronger than others. Oblique ribbon developed on basal disk near its margin. Aperture angulate and continuous. Lines of growth, very fine and close, *Hanstator*-like.

Dimensions:—84 mm. in height, 13 mm. in diameter of the last whorl.

Comparison and remarks:—The present new species is characterized by its small apical angle and high turreted form. No species either allied to it or resembling it has so far been described or reported from Japan. These species, such as *Turritella andenensis* OTUKA(4), *T. kiiensis* YOKOYAMA(5) and *T. perterebra*

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(1) K. MARTIN: Dienst. Mijnb. Nederl., Wetens. Meded., No. 18, s. 22, Taf. 3, fig. 12.

(2) K. MARTIN: Samm. Geol. Reichs. Mus. Leiden, Neue Folge, Bd. 1, p. 207, Taf. XIV, figs. 206, 207.

(3) K. MARTIN: Samm. Geol. Reichs. Mus. Leiden, Neue Folge, Bd. 1, p. 309, Taf. XLV, fig. 73.

(4) Y. OTUKA: Bull. Earthq. Res. Inst., XII, pt. 3, p. 623, Pl. LI, Figs. 100, 113.

(5) M. YOKOYAMA: Jap. Jour. Geol. Geogr., Vol. II, No. 3.

YOKOYAMA(1), are all sculptured in the similar way, but have larger apical angle and no sutural ribbon. The last mentioned difference is observed between *Turritella scripsensis* HANNA(2) and the present species. *Turritella infralirata* NAGAO(3) has more regular and numerous spiral cords than the present new species.

Locality:—Minami-Nayoshi-gawa, Nayoshi-gun, South Karafto (Sachalin).

Geological horizon:—Hacchôrei Hard Shale.

Collector:—K. SAKAKURA, Geologist of the Mitsubishi Mining Co.

Occurrence:—rare. Only one fairly well-preserved specimen was obtained.

Genus *Cuspidaria* NARDO 1840.

Subgenus *Cardiomya* A. ADAMS 1864.

Cuspidaria makiyamai nov. spec.

Pl. 23 (11), figs. 3, 4, 5, 6, 7, 8, 9.

Holotype (Fig. 8):—An example from the Asagai Sandstone; preserved in the Geological Institute, Faculty of Science, Imperial University of Tokyo.

Description:—Shell large for the genus, moderately inflated, rostrate Beak prominent, central, strongly incurved and turned backwards. Posterior end rapidly narrowing, forming rostrum which tapers backward at angle of about 40 degrees. Rostrum not so long, subtruncated terminally. Ventral margin broadly rounded; anterior also rounded broadly and inrolled, joining the ventral by a smaller arc. Disk sculptured with twelve to fifteen elevated, simple, radial threads, the whole crossed by fine, concentric lines of growth. The radials increase in prominence near posterior end, each of them accentuated toward ventral side. We find only close-set lines of growth on rostrum. Resilium under beak faintly observed in present specimens.

Dimensions:—

	Length	Height	Thickness
Holotype (Fig. 8)	21.5 mm.	17.0 mm.	10.3 mm.

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(1) M. YOKOYAMA: Jour. Coll. Sci., Imp. Univ. Tokyo, Vol. XLV, Art. 2, p. 11, Pl. II, figs. 2-5.

(2) HANNA: Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 16, No. 8, p. 308, Pl. 49, fig. 10.

(3) T. NAGAO; Sci. Rep. Tôhoku Imp. Univ., (Geol.), Vol. XII, No. 1, p. 102 (92), Pl. XV, figs. 27-33.

Paratype (Fig. 3)	24.0	13.0	11.0
(Fig. 4)	15.0	12.0	7.0
(Fig. 5)	20.1	16.0	11.0
(Fig. 6)	18.0	13.0	9.2
(Fig. 7)	19.7	15.5	11.0
(Fig. 9)	16.2	13.5	10.0
	15.0	11.5	8.0

Comparison and *remarks:*—The recent form from the Japanese seas, *Cuspidaria* (*Cardiomya*) *gouldiana* Hinds(1), is quite small in size, provided with ten to twelve radial threads, its rostrum being much longer than in the present species.

C. (*C.*) *costellata* Deshayes var. *corpulenta* Dall(2) differs from *C.* (*C.*) *makiyamai* by its numerous and less prominent radials. In *C.* (*C.*) *planetica* Dall(3), it is difficult to distinguish the disk from the rostrum. *C.* (*C.*) *californica* Dall(4) and *C.* (*C.*) *isralskyi* Hanna(5) have radial sculptures on their rostrum.

Cuspidaria (*Cardiomya*) is a rare fossil in Japan. The present material, which was obtained by Dr. J. Makiyama(6) from the Asagai Sandstone of Yotsukura, Iwaki, are now preserved in the Geological Institute of the Tokyo Imperial University and some in the Imperial Geological Survey of Japan. It is very interesting to know that this genus is frequently found in the Eocene Beds of California(7)(8), suggesting a faunal connection between Japan and California.

Strangely enough, a closely resembling species, *Cuspidaria*

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(1) A. Adams: Annals. Mag. Nat. Hist. London, 1868, p. 367.
Pilsbry: Catal. Marine Moll. Jap., p. 136

(2) W. H. Dall: Bull. Mus. Comp. Zool., XXIX, (Blake Moll.), p. 298, Pl. III, fig. 9.

(3) I. S. Oldroyd: Stanf. Univ. Publ., Geol. Sci., Vol. I, p. 99.

(4) I. S. Oldroyd: Idem., p. 101, Pl. 5, fig. 13.

(5) Hanna: Univ. Calf. Publ., Bull. Dept. Geol. Sci., Vol. 16, No. 8, p. 280, Pl. 34, figs. 5, 8.

(6) J. Makiyama: Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, Vol. X, No. 2, Art. 6.

(7) R. E. Dickerson: Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 8, No. 6, pp. 61-180.

(8) F. B. Meek and W. M. Gabb: U. S. Geol. Surv., Palaeontology Vol. 1, (1864).

(*Cardiomya*) *craspedonica* DALL[1], has been described from the Oligocene Beds of Jamaica. Upon comparing with the illustration given by DALL, it is difficult to find any difference between *C.* (*C.*) *makiyamai* and *C.* (*C.*) *craspedonica* DALL. As to whether these two species are really genetically and specifically related to each other or whether the resemblance in the morphological characters is only apparent and fortuitous, the writer has no definite opinion at present.

Locality:—Yotsukura, Yotsukura-machi, Iwaki-gun, Iwaki (Fukushimaken).

Geological horizon:—Asagai Sandstone of Shiramizu Series[2]. (Lowest Miocene or Upper Oligocene.)

Collector:—Prof. Dr. J. MAKIYAMA of the Kyôto Imperial University.

Occurrence:—not so rare.

Explanation of Plate 23 (11)

(All figures are in natural size)

Figs. 1, 2. *Turritella* (*Haustator*) *sakakurai* nov. spec. (Holotype) from the Lower Miocene Beds (Hacchorei Hard Shale) of South Karafto (Sachalin).

Figs. 3–9. *Cuspidaria* (*Cardiomya*) *makiyamai* nov. spec. from the Lower Miocene or Upper Oligocene Beds (Asagai Sandstone of Shiramizu Series) of the Joban Coal Field.

- Fig. 7. Holotype.
- Figs. 3–6, 8, 9. Paratypes.

Figs. 10–13. *Melongena sazanami* nov. spec. from the Lower Miocene Beds (Uyetsuki Series) of Chûgoku.

- Figs. 10, 13. Side view.
- Fig. 11. Apical view.
- Fig. 12. Basal view.

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[1] W. H. DALL: Trans. Wagn. Free Inst. Sci., Vol. III, Pt. VI, p. 1506, Pl. LVII, fig. 17.

[2] K. WATANABE: Expl. Detailed Geol. Map. Jôban Coal Field, Sec. II, (Imp. Geol. Surv. Japan).

本邦新第三紀貝化石（第1報）（摘要）

金原均二

地質調査所の所藏する標本の中の數種を選んで記載を試みた。

1) *Melongena sazanami*（新種）

技師佐藤源郎學士は「高梁」圖幅地質調査に際し多くの新第三紀貝化石を採集せられた。蒐むる所悉く植月津山兩統に屬する地層からである。中國地方新第三紀層の一般たる周知の如く *Vicarya callosa* JENKINS を伴へる暖海性動物群を含める事であるが，玆に記載するメロンゲナも亦その分布は「印度——太平洋區域」に限つて産する暖海屬である。佐藤學士によつて獲られた此新種は特徴ある漣狀の縲狀彫刻を具へ，ジャヷの始新統より産する1種に近似する。

2) *Turritella* (*Haustator*) *sakakurai*（新種）

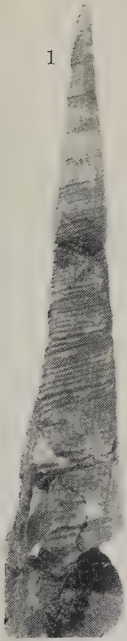
眞岡統の長島貝殼層及び布禮頁岩層は北海道の幌内統及び常磐の淺貝砂岩に對比され得る動物群を含むが，荒貝噴出岩層をへだてて上位にある本斗統の最下部たる八眺嶺硬質頁岩層は一般に化石に乏しい。三菱鑛業の坂倉勝彥學士は南樺太南名好川上流から *Turritella* の1種を本硬質頁岩層から採集せられて筆者に贈られた。之を検するに縲塔極めて秀でた特異な1種である。類似した種若しくは近緣の種は我國からは未だその産出を聞かない。

3) *Cuspidaria* (*Cardiomya*) *makiyamai*（新種）

東大地質教室に槇山教授採集による *Cuspidaria* が保存せられてある。常磐地方によく發達する淺貝砂岩層より産した化石で，亞屬 *Cardiomya* に屬する。*Cardiomya* は米國加州の始新統に甚だ多く發見されるのは注意を惹くが，更に注意すべきはジヤマイカ (Jamaica) の漸新統より産する *Cuspidaria craspedonica* DALL に酷似する事である。

終りにのぞみ，發表を許可せられたる山根所長，種々御教示をいただいた渡邊技師，槇山教授，黑田，大塚，大炊御門，池邊，鈴木諸氏に厚く御禮を申し上げる。尙御多忙中にも拘らず檢閲の勞をとられた渡邊技師，標本を提供せられた槇山教授，佐藤技師及坂倉學士に深く感謝の意を表する。

1



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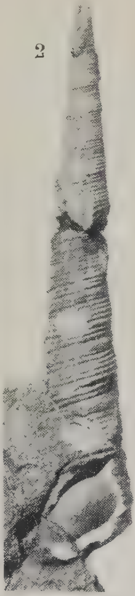

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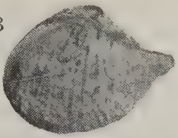

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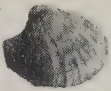

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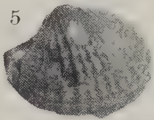

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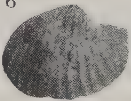

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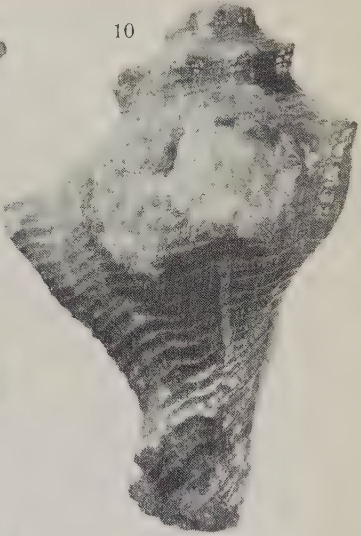

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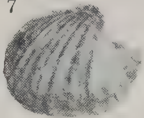

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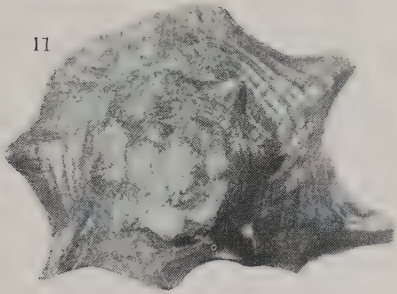

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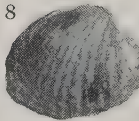

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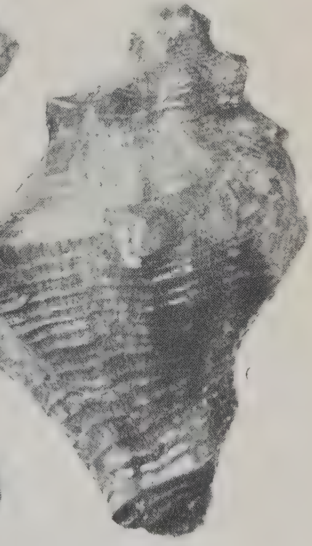

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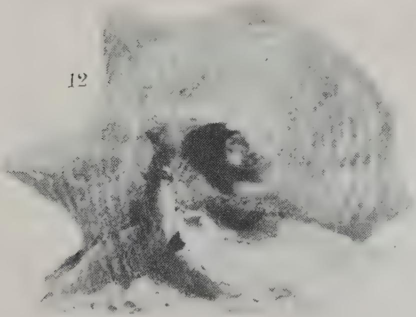

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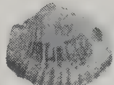


44. *A Pliocene Species of Elphidium from Japan.*

By

Kiyosi Asano

(Contribution from the Institute of Geology and Palaeontology,
Tôhoku Imperial University, Sendai, Japan.
Received May 24th; Read June 19th, 1937)

Elphidium is one of the genera of Foraminifera commonly found in Japan, both in the recent fauna and in some of the late Tertiary and Quarternary formations. There are known about 10 species of the genus in Japan, including one species, *E. ezoense* n. sp., which seems to be extinct.

This short note deals with the species obtained from the Pliocene of Hokkaidô and Karahuto.

Genus *Elphidium* Montfort, 1808.

Genoholotype: *Elphidium macellum* (Fichtel and Moll) = *Nautilus macellus* var. Fichtel and Moll, Test. Micro., 1798, p. 68, pl. 10, figs. h, i, k. Recent, Mediterranean.

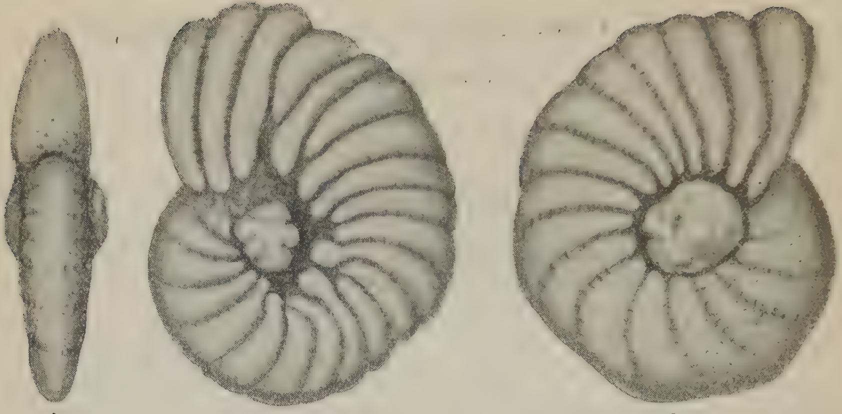
Elphidium ezoense n. sp.

Pl. 24 (12), Figs. 1. 2; text-fig. 1, 2.

Description:—Test comparatively large, compressed, diameter about 4 times thickness, periphery rounded, usually lobulated, umbilical region strongly umbonate, much raised with a large boss of clear shell material; chambers as many as 20 in last formed coil; later chambers slightly inflated with wavy periphery, earlier ones not inflated and entire along periphery; sutures gently curved, depressed, retral processes numerous and short, somewhat indistinct in the earlier ones; wall thick; aperture consisting of a low broad opening at base of apertural face, occasionally with circular pores on central portion of apertural face. Length up to 2.2 mm., breadth ca. 0.6 mm.

Holotype:—Reg. No. 21433, Institute of Geology and Palaeontology, Tôhoku Imperial University, Sendai, Japan.

Locality:—Zarigawa, Numata, Uryû-gun, Hokkaidô. Collected



Elphidium ezoense ASANO n. sp.
Figs. 1a. Side-view of Holotype ×40.
1b. Apertural view of Holotype ×40.
Fig. 2. Side-view of paratype ×40.

by Mr. S. ENDÔ. *Horizon*:—Takikawa beds (Pliocene).

Remarks:—This species is allied to *E. oregonense* CUSHMAN and GRANT[1], but is distinguishable by the different character of umbonal region. It is apparently variable in numbers and shape of chambers.

Occurrence:—The species is very common in the sample collected by Mr. Y. SASSA of the Institute of Mineralogy and Geology, Hokkaidô Imperial University, from the shell-beds (Zintaki beds) of Karagai, Tirie-gun, Karahuto, as well as in the type-locality. This has also been collected by Mr. Y. INAI of our Institute from Rutaka-mati, Rutaka-gun, and Minami-rokusenzawa, Toyohara-mati, Toyohara-gun, Karahuto (the Maruyama sandy shale).

Other species of Foraminifera are almost entirely absent in the materials examined and it is noteworthy that this species is found always in association with *Pecten* (*Patinopecten*) *takahashii* YOKOYAMA,[2] a characteristic Pliocene Mollusca of the above noted

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1) CUSHMAN and GRANT, Trans. San Diego Soc. Nat. Hist., Vol. 5, No. 6, 1927, p. 79, pl. 8, fig. 3.

2) YOKOYAMA, M., Tertiary Mollusca from South Karafuto, Jour. Fac. Sci., Imp. Univ. Tokyo, Sec. 2, Vol. 2, Pt. 10, 1930: Tertiary Mollusca from the Coalfield of Uryu, Ishikari, Ibid., Vol. 3, Pt. 6, 1932. S. NOMURA, A Note on Some Fossil Mollusca from the Takikawa Beds of the Northwestern Part of Hokkaidô, Japan, Sci. Rep. Tôhoku Imp. Univ., Ser. 2, Geol., Vol. 18, No. 1, 1935.

districts. *Pecten takahashii* was first described by Dr. M. YOKOYAMA from the Neogene deposits of Isosu, Higasi-Sakutan, Motodomari-gun, Karahuto; subsequently it was reported by him from the coal-field of Uryû, Hokkaidô. This extinct Mollusca is also common in the Tatunokuti beds of Sendai, where however, *Elphidium ezoense* has not yet been found. Consequently at present, *E. ezoense* seems to have a more or less limited distribution than *Pecten takahashii,* but its later finds with the latter is expected from other places.

Geological age:—This species is a very distinctive element in the Takikawa beds of Hokkaidô, the Zintaki beds or Maruyama sandy shale of Karahuto. These three formations or rather beds exposed at separate districts are now generally accepted as Pliocene in age on its Molluscan fauna.

Finally I wish to express my warmest thanks to Prof. H. YABE for the revision of this short note and also for making possible its publication. Acknowledgements are also due to Messrs. S. ENDO, Y. INAI and Y. SASSA for presenting their specimens to my study.

Explanation of Plate 24 (12)

Elphidium ezoense ASANO, n. sp. ×10.

Fig. 1. Zarigawa, Numata-mura, Uryû-gun, Hokkaidô. "Takikawa Beds", Coll. S. ENDÔ.

Fig. 2. Karagai, Tirie-mura, Tirie-gun, Karahuto. "Zintaki Beds", Coll. Y. SASA.

日本産鮮新世 *Elphidium* の1新種（摘要）

淺野　清

日本產 *Elpidium* の種の數は，現在10種知られてゐるが，中1種は，北海道の瀧川層，樺太の圓山砂質頁岩層,並に仁瀧層から多數產出する。北米西海岸の更新世から報告されてゐる *E. oregonense* CUSHMAN and GRANT に甚だ近いが，臍部形態の相違に依つて，別種と考へ，*E. ezoense* n. sp. なる名稱を與へた。本種は，常に *Pecten takahashii* YOKOYAMA に伴つて產出することから鮮新世有孔蟲と考へられる。尙ほ *Pecten takahashii* の產地で本有孔蟲の發見されない箇所もあるが，それは今後發見の見込があるものと信ぜられる。斯の如く，興味ある有孔蟲の1新種を提供された東北帝大，遠藤講師，稲井講師並に，北海道帝大，佐々助教授に深甚な謝意を表す。

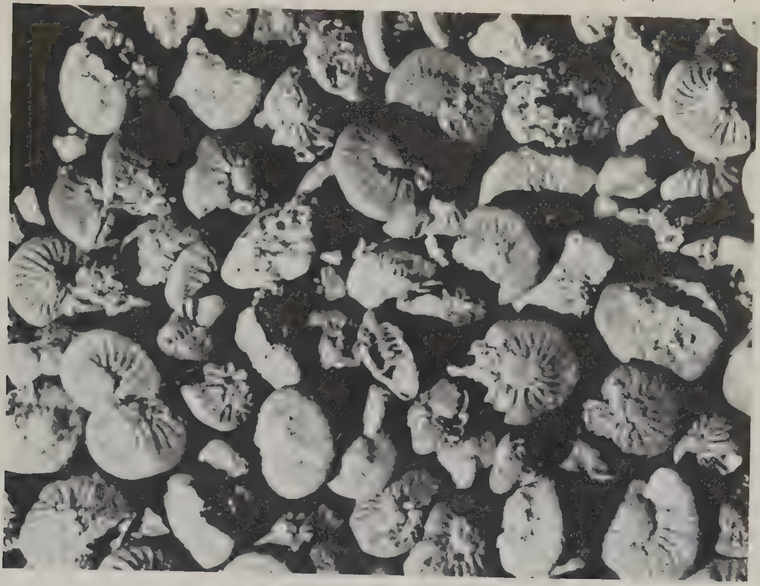

Fig. 1.

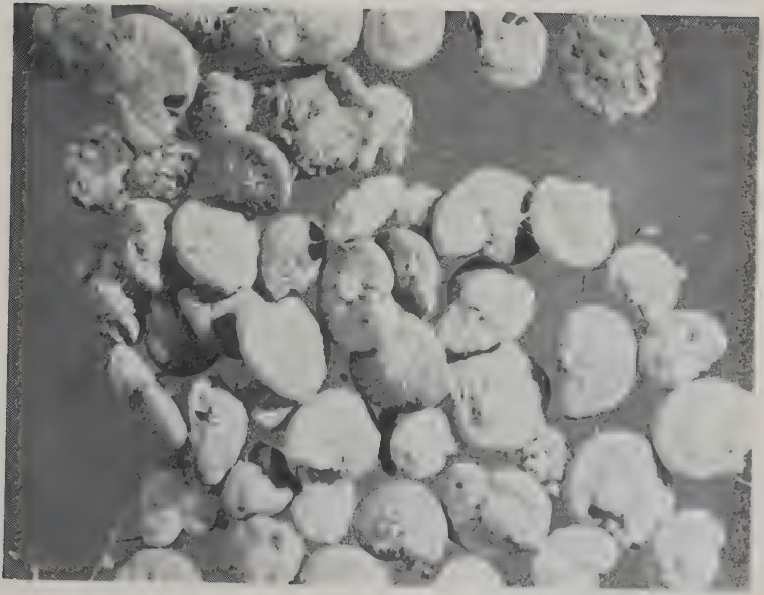

Fig. 2.

45. *Neogene Shells from the Etaibets Oil Field, Hokkaidô.**

By

Kinji KANEHARA

(The Imperial Geological Survey of Japan. Received
May 29th.; read June 19th., 1937.)

The occurrence of fossil Mollusca from the Etaibets Oil-Field was already reported by Dr. M. YOKOYAMA[1] some years ago. Five species, *Neptunea despecta* (LINNÉ), *Buccinum leucostoma* LISCHKE, *Macoma dissimilis* (MARTENS), *Yoldia scapha* YOKOYAMA and *Lucina* sp. (=*Periploma yokoyamai* MAKIYAMA, according to K. WATANABE) were described from beds C of Mr. K. UYEMURA, which, YOKOYAMA regarded as Pliocene in age. In 1936, Mr. Y. IIZUKA of our Survey investigated the geological structure of this field and brought back some of fossil Mollusca. The geological sequence as established by him is enumerated from below, as follows:

Etaibets dark grey shale
Ninara shaly sandstone
Nobsha hard shale
Chipaperi sandy shale
Hokuryû sandstone

Of these beds, all of them are fossiliferous, although the shells are not well preserved.

The determined species are as follows:

	1	2	3	4	5
Acila (Acila) divaricata (HINDS)	r				
Acila (Acila) aff. *gettysburgensis* (REAGAN)	r				
Yoldia (Yoldia) tokunagai YOKOYAMA	r				
Yoldia (Yoldia) lischkei SMITH	f				
Nuculana aff. *robai* KURODA	r				

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* By the permission of Dr. S. YAMANE, Director of the Imp. Geol. Surv. Japan.

[1] M. YOKOYAMA; Jour. Fac. Sci., Imp. Univ. Tokyo, Sec. II, Vol. I, Pt. 7, pp. 235-248.

	1	2	3	4	5
Pecten (Plagioctenium) aff. *cerrosensis mendenhalli* ARNOLD	r				
Lucina acutilineata CONRAD	f	?	r		
Taras (Felaniella) ustus (GOULD)	r				
Thyasira nipponica YABE et NOMURA	r		r		
Cardium (Cerastoderma) taracaicum YOKOYAMA	r				
Venus (Chione) y-iizukai nov. spec.	r				
Macoma praetexta (MARTENS)	r				
Macoma nasuta (CONRAD)	r				
Mya cuneiformis (BÖHM)					r
Dentalium aff. *yokoyamai* MAKIYAMA	r				
Turritella (Haustator) fortilirata saishuensis YOKOYAMA					r
Natica (Tectonatica) janthostoma DESHAYES	r		r		
Neptunea modesta (KURODA)	r		r		
Neptunea intersculpta frater PILSBRY				r	
Neptunea aff. *hukusimensis anomalia* NOMURA et HATAI	r				
Ancistrolepis yamanei KANEHARA (MS)		r			
Buccinum sp.		r			

(r····rare ; f····frequent)

1····Etaibets dark grey shale.
2····Ninara shaly sandstone.
3····Nobsha hard shale.
4····Chipaperi sandy shale.
5····Hokuryû sandstone.

The association of *Thyasira nipponica* YABE et NOMURA, *Mya cuneiformis* (BÖHM), and *Turritella (Haustator) fortilirata saishuensis* YOKOYAMA is characteristic of the Wakkanai hard shale (Lower Pliocene) of the Oiwake Series in the Teshio Oil-Field[1], which is situated about 120 km. north of Etaibets. *Yoldia (Yoldia) tokunagai* YOKOYAMA[2] and *Ancistrolepis yamanei* KANEHARA (MS)[3] are described from the Jôban Coal-Field, the latter of which is found in the lowest Tertiary System, Shiramizu Series, and the overlying Yunagaya Series, while the former is restricted to the Kamenowo shale of the Yunagaya. These two Series are recognized as of Miocene age. *Buccinum hukusimensis anomalia* NOMURA et HATAI[1] is found in the Tanakura Miocene beds of Fukushima-ken. *Venus* (*Chione*) *y-iizukai* KANEHARA nov. spec. has been already reported from the Lower Chikbets Beds of Chikbets Oil-Field under the name of *Chione chitaniana* YOKOYAMA,[2] which beds are believed to be Miocene. From the faunal association and what has just been mentioned, the writer is of opinion that the beds from the Etaibets to the Hokuryū range from Miocene to lower Pliocene in age, and probably may be correlated with the Kawabata Series and the Oiwake of Central Hokkaidō.

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[1] K. WATANABE; Expl. Text. Oil Fields Jap. Emp., Sec. XXXI (Teshio), 1936, (Imp. Geol. Surv. Japan).

[2] M. YOKOYAMA; Jour. Coll. Sci., Imp. Univ. Tokyo, Vol. XLV, Art. 7, p. 10, Pl. II, figs. 12–18.

[3] Manuscript name; it will be published at a near date in the report of the Imp. Geol. Surv. Japan.

DESCRIPTION OF SPECIES

(1) *Acila* (*Acila*) af. *gettysburgensis* (REAGAN). (Pl. 25 (13), Fig. 4.) *Remarks*:—The specimen now under consideration resembles *Acila picturata* (YOKOYAMA)[3] in outline. But according to Dr. H. G. SCHENCK, *Acila picturata* (YOKOYAMA) belongs to the subgenus *Truncacila* and has no rostral sinus, while the present species is provided with rostral sinus, which although ill-defined is observable, as shown in the illustration. The general characters and the subtrigonal outline seem to suggest affinity with *Acila gettysburgensis* (REAGAN).[4]

Locality:—Sekiyu-zawa, Hokuryû-mura.

Geological Horizon:—Etaibets dark grey shale.

Occurrence:—rare.

(2) *Yoldia* (*Yoldia*) *tokunagai* YOKOYAMA. (Pl. 25 (13), Figs. 5, 6.)

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1) S. NOMURA and K. HATAI; Saitô Hô-on kai Res. Bull., No. 10, p. 137, Pl. XVII, fig. 21.

2) M. YOKOYAMA; Jour. Fac. Sci., Imp. Univ. Tokyo, Sec. II, Vol. II, Pt. 4, p. 201, Pl. LI, figs. 3, 4.

3) M. YOKOYAMA; Palaeontographica, XXXVI, p. 194, Taf. XXV, figs. 1, 2a, 2b, (1890).

4) H. O. SCHENCK: Geol. Soc. Amer., Spec. Paper No. 4, p. 78, Pl. 12, figs. 1-15, Pl. 13, figs. 4, 7, 9, Textfig. 8, (11, 14).

Yoldia tokunagai YOKOYAMA; Jour. Coll. Sci., Imp. Univ. Tokyo, Vol. XLV, Art. 7, p. 10, Pl. II, figs. 12-18.

Locality:—Sekiyu-zawa, Hokuryû-mura.

Geological Horizon:—Etaibets dark grey shale.

Occurrence:—not so rare.

(3) *Venus* (*Chione*) *y-iizukai* nov. spec. (Pl. 25 (13) Figs. 1, 2, 3, 4.)

Holotype:—A left valve from the Kawabata Series; preserved in the Imperial Geological Survey of Japan.

Description:—Shell large, heavy, slightly longer than high, inequilateral, subtrigonal in outline. Beaks fairly prominent, strongly turned inward and forward, situated about one-fifth the length of shell from the anterior end. Posterior dorsal margin long and rather strongly convex in about a third of its length, begining at umbone; nearly straight below this. Posterior end more acutely rounded than the anterior. Postero-ventral margin gently rounded and passes into strongly arcuated antero-ventral margin. Antero-dorsal margin short, strongly excavated in front of beak. Umbone broadly rounded at its base. Surface sculptured by numerous conspicuous concentric lines of growth and medium-fine closely crowded radial ribs. Ventral margin crenated internally. Lunule well-defined, depressed, cordate, as long as high, extending two-thirds the length of antero-dorsal margin, sculptured concentrically only. Escutcheon well-defined as long, narrow area which is depressed at more than right angle to main surface of shell; surface smooth except for fine concentric lines of growth. Hinge plate fairly heavy. Ligamental groove rather deep. On left valve, posterior cardinal somewhat elongated, situated on top of nymph plate; middle cardinal bifid and anterior high, bluntly pointed. Of the three cardinals of the right valve, anterior fairly thin, sharp and small; middle feebly bifid, posterior not elongated.

Dimensions:—

	Length	Height	Thickness
Holotype	72 mm.	65 mm.	44 mm.
Paratype	41	40	19.5
	66	60	?
	58	52	32 ?
	39	33	?

Remarks and *Comparison*:—*Chione* is one of the best represented genera in the Miocene of the east and west coast of America[9]. It is not found so frequently in the Miocene beds of our country.

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[9] K. v. W. PALMER; Palaeont. Americana, Vol. 1, (1927).

The present new species has already been obtained from the Lower Chikbets Beds of the Chikbets Oil-Field.(6) Careful examination of the fossil proved that they belong to *Venus y-iizukai* and not to *V.* (*C.*) *chitaniana* (YOKOYAMA). *Venus* (*Chione*) *chitaniana* (YOKOYAMA)(10) and *V.* (*C.*) *securis* (SHUMARD)(11) are lower, more equilateral, and have less arcuate ventral margin. *V.* (*C.*) *carmanahensis* (CLARK)(12), an Oligocene species, is distinguished from the present species by its smaller size and its curiously elongated anterior cardinals. Another Oligocene species, *V.* (*C.*) *lineolata* (CLARK)(13), is lower, more equilateral, and has no bifid cardinals on the right valve. *V.* (*C.*) *richthofeni* (HERTLEIN et JORDAN)(14) has more equilateral and posteriorly restricted shells with more produced anterior margin. From *V.* (*C.*) *ensifera* DALL(15) of the Astoria Miocene Formation, the present species is distinguished by the presence of a well-defined escutcheon. The middle and the anterior cardinals of the former are thin and knife-like. Another allied species is *V.* (*C.*) *panzana* (ANDERSON et MARTIN)(16) from the lower Miocene beds of California, but its cardinals are much heavier than the present species, the middle of which is always bifid. *V.* (*C.*) *mediostriata*(CLARK)(17) has two bifid middle cardinals on the right valve.

Locality:—Etaibets, Hokuryû-mura.

Geological Horizon:—Etaibets dark grey shale.

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10) M. YOKOYAMA; Jour. Fac. Sci., Imp. Univ. Tokyo, Sec. II, Vol. I, Pt. 9, p. 351, Pl. XXXIX, fig. 13.

11) W. H. DALL; U. S. Geol. Surv., Prof. Paper, 59, p. 120, Pl. 11, fig. 8, Pl. 13, figs. 2, 8, 9.

U. S. GRANT and H. R. GALE; Mem. San Diago Soc. Nat. Hist., Vol 1, p. 320, Pl. 17, fig. 1.

12) B. L. CLARK; Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 15, No. 4, p 93, Pl. 18, figs. 12, 13, 14.

13) B. L. CLARK; Idem., Vol. 11, No. 2, p. 150, Pl. 6, figs. 1, 2, 5.

14) HERTLEIN and JORDAN; Proc. Calif. Acad. Sci., Vol. XVI, No. 19, p. 619, Pl. XVII, figs. 4, 7, 8.

15) W. H. DALL; U. S. Geol. Surv., Prof. Paper, 59, p. 122.

T. J. ETHERINGTON; Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 20, No. 5, p. 79, Pl. 7, figs. 4-8.

16) F. M. ANDERSON and B. MARTIN; Proc. Calif. Acad. Sci, IVth Ser., Vol. IV, p. 58, Pl. I, figs. 1a, 1b.

17) B. C. CLARK; Univ. Calif. Publ., Bull. Dept. Geol. Sci., Vol. 11, No. 2, p 150, Pl. 5, figs. 5, 6, Pl. 6, figs. 3, 4.

Occurrence:—rare.

Explanation of Plate 25 (13)

Figs. 1–4. *Venus (Chione) y-iizukai* nov. spec.
Loc. Shmarinai, Horokanai, Ishikari and Sekiyu-zawa, Hokuryû-mura, Etaibets.
Figs. 1, 2 (×1) Holotype.
Figs. 3, 4. (×3/2) Paratype.
Fig. 5 (×1) *Acila (Acila)* aff. *gettysburgensis* (REAGAN)
Figs. 6, 7. (×1) *Yoldia (Yoldia) tokunagai* YOKOYAMA

北海道惠岱別油田の貝化石 (摘要)

金原均二

地質調査所技師飯塚保五郎氏は北海道中央部惠岱別油田の地質を調査せられた際に若干の貝化石を採集せられた。之を検するに總數 22 種，中現棲種は半ばを超えない。同技師による地層細別は，下より惠岱別暗灰色頁岩層，ニナラ頁岩質砂岩層，信砂（ノブシヤ）硬質岩層，チパペリ砂質頁岩層，北龍砂岩層である。

惠岱別暗灰色頁岩層は最も化石に富むが，總數は至つて少い。大體下部より上部にわたつて，北海道中部の川端——追分兩統に對比せらるゝ如くである。

發表を許可せられた山根所長，材料を提供せられ且種々御教示を賜はつた飯塚技師に厚く感謝の意を表する。

Jour. Geol. Soc. Japan, Vol. XLIV, Pl. 25 (13) (KANEHARA)

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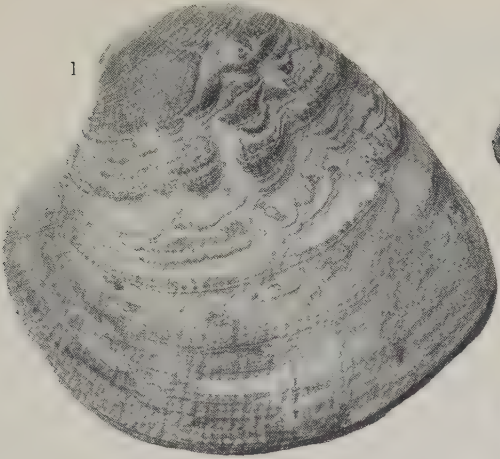

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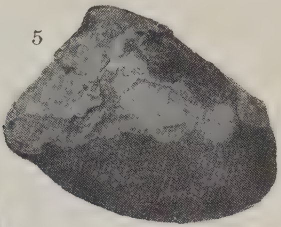

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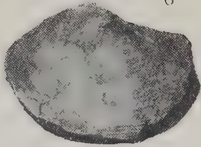

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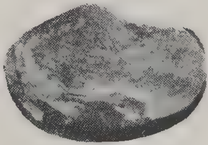

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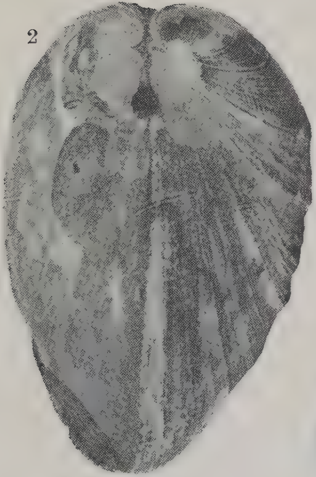

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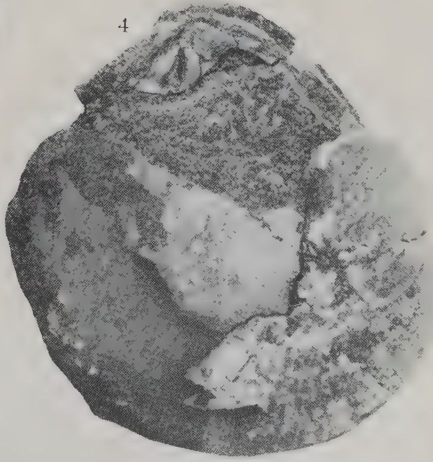

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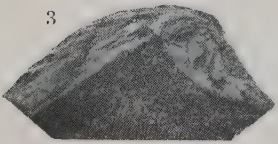


46. *Ogygitoides yabei*, a New Species of Trilobite from the Tsinan Limestone of Shantung, China

By

H. Y. Ma

(Contribution from the Institute of Geology and Palaeontology, Tôhoku
Imperial University, Sendai, Japan. Received June 11th;
read June 19th, 1937)

The present article is based on specimens collected by Prof. H. Yabe and Mr. K. Ozaki from the Tsinan limestone of Middle Ordovician age, west of Poshan (博山), Shantung, China. The Tsinan limestone is beleived to be correlated with the Chikusan bed of South Korea and the Black River-limestone of North America.

At this place I should like to offer my warmest thanks to Prof. H. Yabe and Mr. K. Ozaki for kindly presenting their specimens to my study, and specially to Prof. H. Yabe for making possible the publication of this short note.

Genus *Ogygitoides* Kobayashi, 1934

1934 *Ogygitoides* Kobayashi, The Cambro-Ordovician Formations and Faunas of South Chosen. Jour. Fac. Sci. Imp. Univ. Tokyo, Sec. 2, Vol. 3, Pt. 8, pp 483-484.

This genus was established by T. Kobayashi with the following remarks: "This genus is rather similar to *Pseudobasilicus* Reed, but differs from *Basilicus lawrowi* Schmidt, the genotype of *Pseudobasilicus*, in the forwardly tapering glabella, middle eyes, and steep inclination of posterior limb of facial suture. The thoracic segments are not so falcated at the lateral extremities as in *Pseudobasilicus*. By these differences this new genus is easily separated from *Pseudobasilicus.* These criteria also imply that *Asaphus nobilis* BARRANDE and *Asaphus ingens* BARRANDE may be more suitably grouped in *Pseudobasilicus* than in *Ogygitoides.*"

KOBAYASHI also states that *Isoteloides* of RAYMOND is similar to *Ogygitoides* in general form, narrow axial lobe, obliteration of ribs and furrows, and in the presence of the marginal border on the cephalon and pygidium, but it is distinct in the feature of the glabella, which is marked merely with subparallel dorsal furrows without any clear division into anterior and posterior lobes as in *Ogygitoides.* The glabellar outline of *Isoteloides* approaches more to *Pseudogygites* than to the present genus. The generic characters are given below.

Diagnosis:—Entire shield smooth, elliptical, convex. Cephalon and pygidium large, nearly of equal length. Glabella subsphaerical, tapering forwardly, its furrows narrow, faint; occipital furrow shallow, distinct. Preglabellar area wide, concave border wide, defined, usually upturned. Fixed cheeks moderately wide. Compound eyes large, situated medially. Facial sutures isoteliform. Free cheeks rather large, long, with long genal spines.

Thorax with 8 segments, axial lobe slightly wider than pleural ones; apices of pleura rectangular.

Pygidium semi-ovate, axis sharply defined by dorsal furrows, tapering back rapidly; axial and pleural furrows faint, marginal border wide, usually depressed below pleural lobes.

Genotype:—*Ogygitoides raymondi* KOBAYASHI

Range:—Middle Ordovician

In the present collection of fossils from Shantung, China, is found a cast of the shield of a Trilobite with its cephalon faintly preserved, and the left pleural lobes of the thorax and pygidium crushed. This specimen evidently represents a new species, for which the following is proposed.

Ogygitoides yabei MA, n. sp.

Pl. 29 (14), Figs. 1–4.

Description:—Entire shield elliptical, quite convex. Cephalon and pygidium of nearly equal size, semi-ovate in outline. Glabella subspherical, moderately wide, hardly convex; dorsal and glabellar furrows shallow and faint. Occipital furrow weak. Preglabellar area narrow. Fixed cheek with two large anterior and posterior limbs at each side. Facial sutures isoteliform (?). Eyes semi-circular, moderate in size, situated behind middle. Free cheeks broken.

Thorax of 8 segments, convex. Axial lobe wide; articulated half rings distinctly marked on fifth and sixth rings. Pleural apices rectangular, its grooves and furrows narrow, defined.

Pygidium subtriangular, strongly convex. Pygidial segments faint. Axis strongly tapering back, well marked by dorsal furrows. Pleural lobes steeply inclining to margin; marginal border wide. Surface smooth.

Dimensions:—Length of entire shield	ca. 13.2 cm.
Length of cephalon	47.0 mm
Length of thorax	35.0 〃
Length of pygidium	50.0 〃
Width of axial lobe	28.0 〃
Width of pleural lobe	23.0 〃
Width of marginal border	8.0 〃

Comparison:—Compared to *Ogygitoides raymondi* KOBAYASHI, the present species has a wider and less convex glabella, weaker glabellar and dorsal furrows, fainter occipital furrow, narrower preglabellar area, wider axial lobe of thorax, with articulating half rings marked on the fifth and sixth rings, pleural lobes more strongly convex and more steeply inclined to margin, pleural grooves defined, and the pygidium is subtriangular in outline.

Formation and *Locality*:—Middle Ordovician, Tsinan limestone, east of the Yiauchiayü (姚家峪) fault, west of Poshan (博山), Shantung, China. Collected by H. YABE and K. OZAKI.

Holotype:—Preserved in the collection of the Institute of Geology and Palaeontology, Tôhoku Imperial University, Sendai, Japan. Reg. No. 61430.

山東「濟南石灰岩」產三葉虫の1新種 *Ogygitoides yabei* （摘要）

馬　希　融

著者は矢部教授及び尾崎金右衛門理學士に依て山東省博山（ポーシヤン）の西・姚家峪（ユウチヤウユウ）斷層の東より採集し來たれる1三葉蟲化石を精査せし處，此標本は南鮮中奧陶紀織雲山（チクン）層產の *Ogygitoides* 屬に所屬するものにして，此屬の模式種 *O. raymondi* KOBAYASHI とは頭鞍及び中軸の外形と特性等の點に於て識別し得るを以て新種と認められ，茲に *Ogygitoides yabei* MA の新名を附したり。尙其の化石を含む所謂濟南石灰岩は南鮮織雲山層並に北米 Black

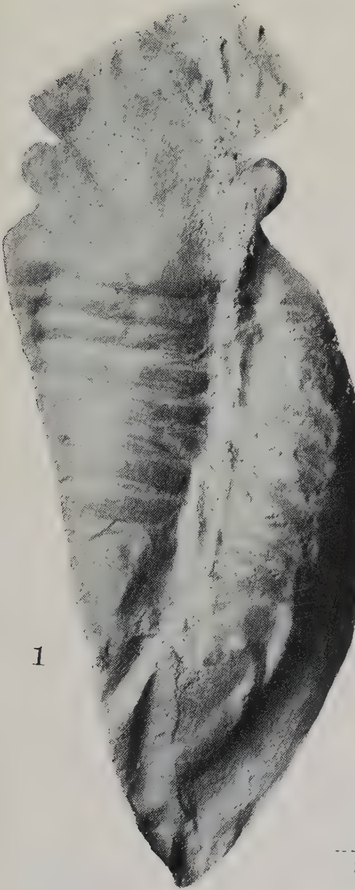
River limestone に對比し得ることを論じたるものなり。

Explanation of Plate 29 (14)

Ogygitoides yabei Ma, n. sp.

Fig. 1. Weathered surface, dorsal view of cast. Nat. size.
Fig. 2. Restoration, dorsal view, showing the entire shield. ×3/4.
Fig. 3. The same, right side view. ×3/4.
Fig. 4. Profile of the test.
(aa′): Basal width of cephalon.
(bb′): Posterior width of thorax.

Middle Ordovician: In Tsinan limestone, east of Yiaochiayü Fault, West of Poshan, Shantung, China.



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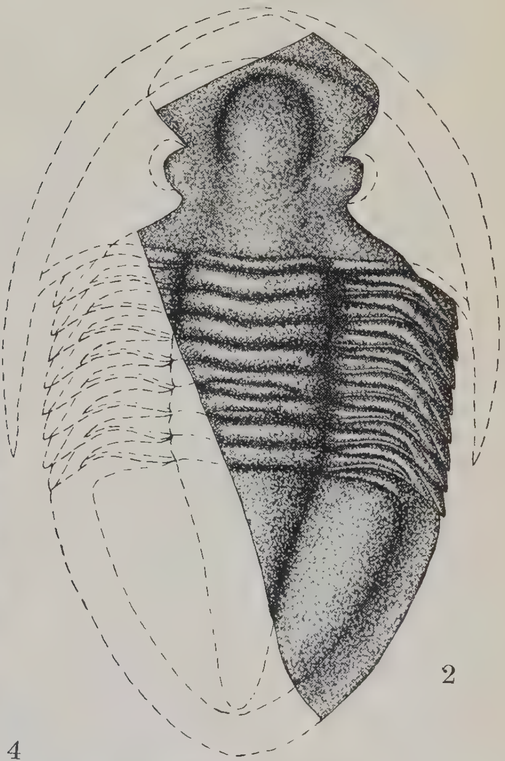

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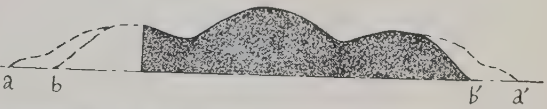

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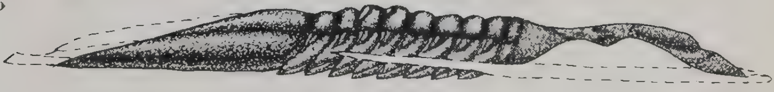

Kimura photo. and H. Y. Ma del.

47. *Jurassic Erect Stumps unearthed at the Court of the 77th Regiment of Heizyô, Korea*

By

Misaburô SHIMAKURA

(Read June 19th ; received June 25th, 1937)

In September 12th, 1936, two large erect petrified stumps were unearthed at the court of the 77th Regiment of Heizyô, Korea (Tyôsen) (Fig. 1). The writer received from Mr. Masaru KUROKI, Teacher of the Heizyô Middle School, one piece of petrified wood from each of these stumps.

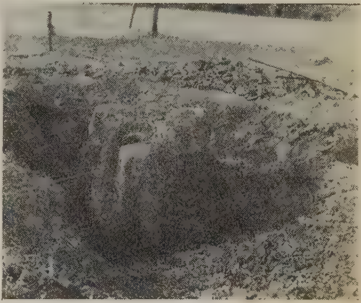

Fig. 1. A erect petrified stump of *Phyllocladoxylon heizyôense* SHIMAKURA unearthed at the court of the 77 Regiment of Heizyô. (*M. Kuroki photo.*)

The specimens are grayish-brown, measured about 20 cm long, 2 × 3 cm broad. The tissue is generally ill-preserved, although the wood-grains and growth rings are visible to the unaided eyes. The wood is composed of only tracheids and rays ; it is free from resin canal and wood parenchyma (Fig. 2). The bordered pits on the radial walls of early wood tracheids are circular or oval, separated one another, and arranged in one or two rows, opposite when in two rows (Fig. 3). The tangential bordered pits of late wood tracheids are not clear owing to ill-preservation of cell-walls. The crassulae are present on the radial walls of early wood tracheids. The rays are always uniseriate, and parenchymatous ; both tangential and horizontal walls are thin and smooth, lateral walls have one, rarely two, large oval or oblong simple pits in the fields of early wood ; one, oval or lenticular pit is in these of late wood.

From the foregoing structural features, it is evident that this coniferous wood belongs to *Phyllocladoxylon* GOTHAN[1]. Since this

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1) W. GOTHAN: Abh. k. Preuss. Geol. Land. (N. F.), XLIV, 1905. p. 55.

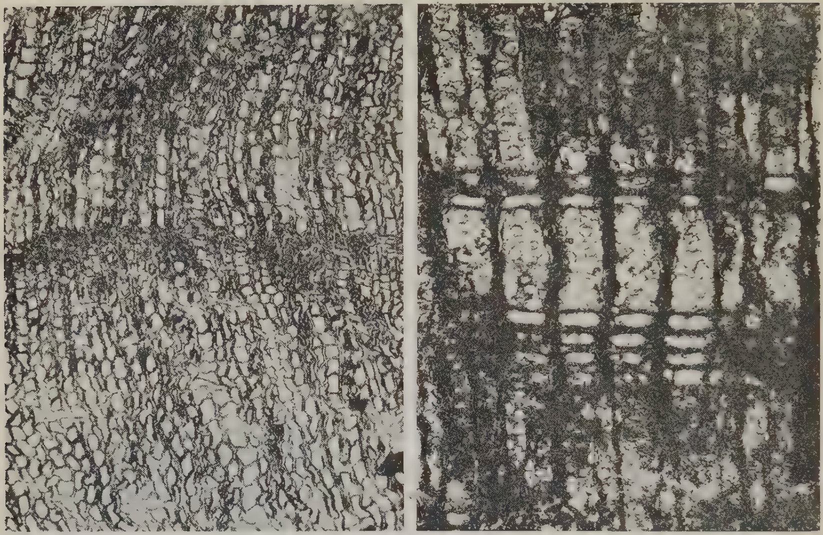

Fig.2 Fig. 3

Phyllocladoxylon heizyôense Shimakura, Fig. 2, a transvese section of the wood, ×ca. 35; Fig. 3, a radial section of the early wood, ×ca. 100.

genus was instituted by Gothan in 1905, five species have been assigned to it, they are, *Phyllocladoxylon Mülleri* (Schenk)[1], *Ph. antarcticum* Gothan[2], *Ph. eboracense* (Holden)[3], *Ph. Gothani* (Stopes)[4], and *Ph. heizyôense* Shimakura[5], besides three indeterminable species are recorded by Gothan[6], Thomas[7], and Shimakura[8]. The present specimen is identical in every respect with *Phyllocladoxylon heizyôense* Shimakura, which is only species of the well known Jurassic forest at the court of the Heizyô Middle School.

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1) Schimper & Schenk: in Zittel, Handbuch d. Palaeontologie, V, 1890, p. 873.

2) W. Gothan: Wiss. Ergeb. Schwed. Südpolarexp., 1901–1903, III, 1908, p. 4. A. C. Seward: Fossil Plants, IV, 1919, p. 210. R. Kräusel: Arkiv f. Bot., XIX, 1924, p. 5.

3) R. Holden: Ann. Bot., XXVII, 1913, p. 536.

4) M. C. Stopes: Cat. Mes. Plants, Brit. Mus. The Cretaceous Flora II, 1915, p. 228. M. Shimakura: op. cit., 1936, p. 285.

5) M. Shimakura: Sci. Rep. Tôhoku Imp. Univ.. Ser. 2, XVIII, 1936, p. 281.

6) W. Gothan: Kgl. Svensk. Vetensk. Acad. Handl., XLII, 1907, p. 9.

7) H. H. Thomas: Mém. Com. Geol. St. Pétersburg (N. S.) Livr., LXXI, 1911, p. 80.

8) M. Shimakura: Sci. Rep. Tôhoku Imp. Univ., Ser. 2, XVIII, 1936, p. 287.

According to S. KAWASAKI[1], the Mesozoic Formation of Heizyô district, the 'Daidô Formation', is divisible into three parts from stratigraphical and palaeontological points. The upper division was correlated with the Wealden Formation of Europe by KINOSAKI. Middle division is exposed in Heizyô City and its suburbs, and has plant remains and also often *Cyrena* in its upper horizon ; the fossil forest in the court of the Heizyô Middle School and at the foot of Botandai on the right bank of the Daidôkô belong to this division. The present writer[2] found *Xenoxylon latiporosum* (CRAMER) GOTHAN from the quarry of Botandai, and *X. phyllocladoides* GOTHAN from the bank of the Daidôkô. The new find of *Phyllocladoxylon heizyôense* SHIMAKURA at the court of the 77th Regiment of Heizyô may suggest that the Jurassic forest of Heizyô had a wide extention.

In conclusion, the writer wishes to express his sincere thanks to Prof. H. YABE of the Tôhoku Imperial University, for his kind guidance.

平壤第 77 聯隊營庭より發掘されたジュラ紀の化石樹幹（摘要）

島 倉 巳 三 郎

昭和 11 年 9 月 12 日，平壤第 77 聯隊營庭の工事中 2 株の直立化石樹幹が發見され，筆者は平壤中學校の黒木勝氏よりその材料を送られた。此等の薄片を作つて鏡檢すれば，假導管の放射面には圓形の重緣孔紋が 1〜2 列に對狀に配列し，クラズレーも明瞭，射出線の各分野には 1 個稀に 2 個の大きな圓形乃至長楕圓形のアイポーレン (Ei-poren) がある。柔細胞並びに樹脂道はない。此等の構造は平壤中學校の有名な化石林を構成してゐる樹と全く同一であるから，本材料を *Phyllocladoxylon heizyôense* SHIMAKURA に同定する。此の結果，平壤の化石林は中學校のみならずもつと廣い範圍に亘つて存在してゐたものと考へられる。

終にのぞみ，此の小文を御校閲下された矢部先生，及び材料を御送附下された黒木勝氏に深く感謝する。

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[1] S. KAWASAKI: Bull. Geol. Surv. Korea, IV, Pt. 1, 1925, p. 2-3.

[2] M. SHIMAKURA: Jour. Geol. Soc. Japan, XLI, 1934, p. 10.

日本古生物學會記事

Proceedings of the Plaeontological Society of Japan

昭和 12 年 6 月 19 日　日本古生物學會第 7 回例會を東京帝國大學理學部地質學教室に開く（參加者 26 名)。講演者並に講演題目次の如し。

A Pliocene *Elphidium* from Japan. (代讀)	Kiyosi ASANO
Younger Palaeozoic Fossils from the Toriasi-mountain-block Ibaraki Prefecture.	Haruyosi HUJIMOTO and Hisashige HATAKEYAMA
On the Ordovician Climate of Northern Hemisphere deduced from the Growth Rate of Tabulate Corals.	T. Ying H. MA
長崎縣佐世保產沖積世貝化石	金井達郎
Nuculanas from the Upper Musasino Formation, Japan.	Kôiti SUZUKI
Pleistocene Mollusks of Manchoukuo.	Kôiti SUZUKI
廣島市地下產出の貝化石	鈴木好一
Pliocene Shells from the Toshio Oil Field, Hokkaidô.	Kinji KANEHARA
On Some Neogene Shells from Japan (Part I).	Kinji KANEHARA
北海道惠岱別油田の貝化石	金原均二
北海道及び常磐の貝化二, 三	大塚彌之助
五日市に於ける Carnic (?) 化石新發見	張麗旭
Salterella conulata CLARK に就いて	小林貞一
Polidesmia sanaliculata LORENZ, an Ordovician Actinoceroid Cephalopod. (代讀)	Curt TEICHERT
Lophospira と *Pagodispira* に就いて	小林貞一 吉村一郎
On a New Species of *Stomopneutes* from the Eocene of Hahazima	Syôzô NISIYAMA
Ogygitoides yabei, a New Species of Trilobites from Tsinan Limestone of Shantung, China. (代讀)	H. Y. MA
Miscellaneous Fossil Vertebrates from Mongolia.	Fuyuji TAKAI
Jurassic Erect Stumps unearthed at the Court of the 77th Regiment of Heizyô, Korea. (代讀)	Misaburô SHIMAKURA
本邦の亞炭層中に含まれてゐる微細植物化石の研究（第 1 報）(代讀)	島倉巳三郎

昭和 12 年 4 月 1 日以降 6 月 30 日迄の入會會員氏名次の如し。

吉村永治　　盛辛夫　　黃汲清

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1. 本會ハ日本地質學會ノ部會ニシテ日本古生物學會ト稱ス
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3. 本會ハ第2條ノ目的ヲ達スルタメニ總會及講演會ヲ開ク
4. 本會ノ紀事及ビ會員ノ寄稿ハ地質學雜誌ニ掲載シ，其ノ別刷ヲ日本地質學會々員ニアラザル本會々員ニ配布ス
5. 本會ノ會費ハ年額3圓トシ，日本地質學會々員ハ年額1圓トス，但シ一時ニ金100圓以上ヲ寄附セル者ヲ賛助會員ニ推ス
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日本古生物學會
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Constitution of the Palaeontological Society of Japan.

Article 1. The Society shall be known as the Palaeontological Society of Japan. It forms a section of the Geological Society of Japan.

Article 2. The object of the Society is the promotion of palaeontology and related sciences.

Article 3. This Society to execute the scheme outlined under Article 2, shall hold annual meetings and discussions.

Article 4. Proceedings of the Society and articles for publication shall be published through the Journal of the Geological Society of Japan. Separates and circulations will be sent to members of the Palaeontological Society who are not members of the Geological Society of Japan.

Article 5. The annual dues of this Society is two dollars for the foreign members of the Society.

Article 6. This Society shall hold the following executives. President one person, Councillors several persons.

Article 7. The President and Councillors shall be elected annually. The President and Councillors shall be elected from the Society body by vote of its members. All elections shall be ballot.

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